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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/674,106	12/26/2000	Takashi Kinouchi	6715/60750	3130

7590

04/07/2005

Jay H Maioli  
Cooper & Dunham  
1185 Avenue of the Americas  
New York, NY 10036

EXAMINER

CHU, KIM KWOK

ART UNIT PAPER NUMBER

2653

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/674,106

Applicant(s)

KINOUCHI, TAKASHI

Examiner

Kim-Kwok CHU

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 1018/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4,6-10,12-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-10,12-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/24/2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. PCT/JP00/01040.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Remarks***

1. Applicant's Remarks filed on October 18, 2004 have been fully considered.

(a) Applicant states that "there is no suggestion in any of these references of a system employing three different transmission rates in order to obtain the ultimate second removable disk recording medium having the first removable disk recording medium as the source medium by using an intermediate hard disk drive" (page 14 of the Remarks, lines 11-16). Accordingly, the prior art of Scheffler (U.S. Patent 6,263,154) in view of Krikorian (U.S. Patent 5,726,909) teach a source removable disk medium 46, a destination removable disk medium 62 and a temporary storage medium 44 replaced by Krikorian's hard disk library 18 as a bridge of the information route (Figs. 1 and 2).

(b) With respect to the claimed first transmission rate, the prior art of Scheffler teach a first transmission rate of the source removable disk 46. The first transmission rate such as data transfer among the components of the source side is inherently higher than a data readout (reproduce) rate.

(c) With respect to the claimed second transmission rate, the prior art of Scheffler in view of Krikorian' teaches a second transmission rate of the temporary storage unit 44 replaced with a hard disk library 18. The second transmission

rate such as data written (recorded) to Krikorian's hard disk library 18 is inherently higher than the known recording rate of the second removable disks such as a tape drive 62. In addition, the second transmission rate such as data written to Krikorian's hard drive 18 is inherently less (slower) than the first transmission rate such as data transferred among the components of the source side 46.

(d) With respect to the claimed third transmission rate, data read out from Krikorian's hard disk drive 18 must equal to the recording rate of the second (destination) medium 62 so that data will not be over-run or under-run. The third transmission rate for data recording in a second recording medium 62 is inherently less than the second transmission rate (hard disk recording rate).

(e) Since the prior art of Scheffler teaches Applicant's claimed features, the amended claims are rejected again.

**Claim Rejections - 35 USC § 103**

2. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

3. Claims 1-4, 6, 13-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scheffler (U.S. Patent 6,263,154) in view of Krikorian (U.S. Patent 5,726,909).

Scheffler teaches a digital recording and/or reproducing apparatus very similar to that of the instant invention. For example, Scheffler teaches the following:

(a) as in claim 1, a reproducing unit 48 for reading out digital data from a first removable disk recording medium 46 at a known read out rate at a first transmission rate higher than the known read out rate of the first removable disk recording medium 46 (Fig. 1; the first transmission rate such as data transfer among the components of the source side 46 is inherently higher than a data readout (reproduce) rate);

(b) as in claim 1, a temporary storage unit 44 directly connected to the reproducing unit 48 for temporarily storing

digital data read out by the reproducing unit 48 in controller 40 (Figs. 1, 2 and 5; column 6, lines 20-37; master storage is a temporary storage unit when retrieving data to be recorded in the destination medium);

(c) as in claim 1, the temporary storage unit 44 includes an input/output calculation unit for processing the digital data read out from the reproducing unit in controller 40 with modulation, error correction and encoding before feeding to the temporary storage unit for temporarily storing the digital data (Figs. 3 and 9; column 4, lines 50-59; analog to digital conversion includes modulation, error correction and encoding are required to digitalized the data into a certain storable format);

(d) as in claim 1, a recording unit 68 for recording digital data read out from the temporarily storage unit 44 in a second removable disk recording medium 62 (Fig. 3; column 8, lines 55-60; destination medium 62 is a removable medium );

(e) as in claim 1, the controlling means 40 for controlling respective operations of the reproducing unit, the temporary storage unit 44 and the recording unit 68 (Fig. 2; custom recording; column 1, lines 15-19);

(f) as in claim 1, the controlling unit 40 causing the digital data from the reproducing unit to be written in the temporary storage unit 44 at a second transmission rate higher

than a predetermined recording rate of the second recording medium 62 and less than the first transmission rate (Fig. 2; inherent feature where the storage/write speed of the temporary storage such as an optical drive is faster than the recording rate of the destination recording medium 62 such as a tape drive; the second transmission rate such as data written to the temporary storage 44 such as a optical drive/hard drive 18 is inherently less (slower) than the first transmission rate such as data transfer among the components of the source side 46);

(g) as in claim 1, the controlling unit 40 causing the digital data to be read out from the temporary storage unit 44 at a third transmission rate equal to the known recording rate for the second removable disk recording medium 62 and less than the second transmission rate (Fig. 2, the second recording medium is recorded in a standard format/rate; data read out from the temporary storage unit 44 must equal to the recording rate of the second (destination) medium 62 so that data will not be over-run or under-run);

(h) as in claim 1, controlling means 40 causing the digital data to be read out from the temporary storage unit 44 at a third transmission rate equal to the known recording rate for the second removable recording medium 62 (Fig. 2; data read out from the temporary storage means 44 such as optical drive/hard drive must equal to the recording rate of the second

(destination) medium 62 so that data will not be over-run or under-run. The third transmission rate for data recording in a second recording medium 62 is inherently less than the second transmission rate (optical drive/hard disk recording rate).

(i) as in claim 2, when the reading out operation of the reproducing unit 48 in the controller 40 comes to a close/complete, the controlling means 40 causes the read-out data to be recorded on the second removable recording medium 62 by the recording unit 68 (Fig. 2; data recording starts when the required data read process is completed);

(j) as in claim 3, when the reading out operation from the first removable recording medium 46 by the reproducing unit in the controller 40 comes to a close, the controlling means 40 causes the read-out data to be recorded on the second removable recording medium 62 (Fig. 2; data recording starts when the required data read process is completed);

(k) as in claim 4, the controlling means 40 halts the recording by the recording unit 68 when the second removable recording medium 62 is not loaded on the recording unit at a starting time (Fig. 2; inherent feature where a recording operation fails/stops if there is no recording medium to record data); and

(l) as in claim 6, the data processing input/output calculation unit (in recording unit 68) is controlled by the



controlling means 40 so that data read out from the temporary storage unit is decoded and read out at the transmission rate equal to the known recording rate for the second removable recording medium (Fig. 2; inherent feature where data rate sent for recording is the recording rate).

However, Scheffler does not teach the following:

(a) as in claim 1, the temporary storage unit 44 includes a hard disk drive as a temporary storage unit for temporarily storing the digital data.

Krikorian teaches a hard drive which is used as a temporary storage unit 18, 20, 22 (remote library ) for storing received files (Fig. 1).

Although Scheffler's temporary storage unit is not a hard drive, for the advantage of storage speed and capacity, it would have been obvious to one of ordinary skill in the art to replace Scheffler's optical storage medium with Krikorian's hard drive storage unit, because the hard drive can be used as a library so that it can retrieve data upon request faster than the optical storage medium.

4. Claims 13-16 and 18 have limitations similar to those treated in the above rejection, and are met by the references as discussed above.

5. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scheffler (U.S. Patent 6,263,154) in view of Krikorian (U.S. Patent 5,726,909).

Scheffler teaches a digital recording and/or reproducing apparatus very similar to that of the instant invention. For example, Scheffler teaches the following:

(a) as in claim 7, a reproducing unit including a decoding processing unit 48 for decoding data read out from a first removable recording medium 46 at a first transmission rate faster than a known readout rate for the first removable disk recording medium (Fig. 1; the first transmission rate such as data transfer among the components of the source side 46 is inherently higher than a data readout (reproduce) rate);

(b) as in claim 7, the reproducing unit is for outputting a playback signal (Fig. 1);

(c) as in claim 7, a first controlling unit 40 for controlling the decoding processing unit (Fig. 3);

(d) as in claim 7, a temporary storage unit 44 for storing data read out from the first removable recording medium 46 (Fig. 2);

(e) as in claim 7, the storage unit 44 includes an input/output calculation unit (in module 48) for processing the digital data from the reproducing unit 48 with modulation, error correction and encoding before feeding the digital data

at a second transmission rate to the temporary storage unit 44 for temporary storing data (Fig. 3; column 3, lines 51 and 52; analog to digital conversion includes modulation, error correction and encoding are required to digitalized the data into a certain storable format; the second transmission rate such as data written to an optical drive is inherently less (slower) than the first transmission rate such as data transfer among the components of the source side 46);

(f) as in claim 7, a recording unit 68 including an encoding unit 142 for encoding digital data read out from the temporary storage unit 44 (Fig. 9; column 8, lines 59 and 60; digital to analog conversion includes modulation, error correction and encoding are required to digitalized the data into a certain storable format);

(g) as in claim 7, a second controlling unit 72 for controlling the encoding unit (Fig. 2);

(h) as in claim 7, the recording unit 68 storing digital output data from the encoding unit in a second removable recording medium 62; (Fig. 2; column 8, lines 59 and 60);

(i) as in claim 7, a third controlling unit 42 for supplying respective control signal-signals to the first controlling unit and to the second controlling unit to control operation of the reproducing unit and operation of the

recording unit (Figs. 1 and 2; custom recording; column 1, lines 15-19);

(j) as in claim 7, the third controlling unit 42 supplying a control signal to the input/output calculation unit of the temporary storage unit 44 to read out digital data from the storage unit at a third transmission rate equal to a known recording rate of the second removable recording medium and less than the second transmission rate (Fig. 2; the second recording medium is recorded in a standard format/rate; data read out from the temporary storage unit 44 must equal to the recording rate of the second (destination) medium 62 so that data will not be over-run or under-run. The third transmission rate for data recording in a second recording medium 62 is inherently less than the second transmission rate (hard disk recording rate);

(k) as in claim 7, the third controlling unit 42 sending a control signal to the second controlling unit 72 to cause digital data supplied thereto to be recorded on the second removable recording medium 62 at the known recording rate for the second removable recording medium (Fig. 2; the second removable recording medium is recorded in a standard format/rate);

(l) as in claim 8, the third controlling unit 42 causes digital data to be read out from the temporary storage unit 44

after an end of the reproducing operation of the first recording medium by the reproducing unit to route the read out data to the recording unit 68, the read out data being recorded by the recording unit on the second recording medium 62 (Fig. 2; data recording starts when the required data read process is completed);

(m) as in claim 9, when the data recording start time point is previously set in the second removable recording medium 62, the third controlling unit 42 causes digital data to be read out from the temporary storage unit 44 when the time is at the data recording start time point to route the read out data to the recording unit 68 to cause the read out data to be recorded on the second removable recording medium 62 (Fig. 2; start time is the download time);

(n) as in claim 10, when the second removable recording medium 62 is not loaded on the recording unit 68 and the time is the data recording start time point, the third controlling unit 42 halts the recording operation of the second removable recording medium 62 (Fig. 2; inherent feature where a recording operation fails/stops if there is no recording medium to record data); and

(o) as in claim 12, the data processing input/output calculation unit is controlled by the third controlling unit 42 so that digital data read out from the temporary data storage

unit 44 is processed with further decoding so that the data is read out at the transmission rate equal to the known recording rate of the second removable recording medium 62 (Fig. 2; third controlling unit 42 controls the duplication process of data stored in the temporary storage unit to the recording medium with encoding process).

However, Scheffler does not teach the following:

(a) as in claim 7, the temporary storage unit 18, 20, 22 includes a hard disk drive as a temporary storage unit for temporarily storing the digital data (Fig. 1).

Krikorian teaches a hard drive which is used as a temporary storage unit (remote library) for storing received files.

Although Scheffler's temporary storage unit is not a hard drive, for the advantage of storage speed and capacity, it would have been obvious to one of ordinary skill in the art to replace Scheffler's optical storage medium with Krikorian's hard drive storage unit, because the hard drive can be used as a library so that it can retrieve data upon request faster than the optical storage medium.

6. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scheffler (U.S. Patent 6,263,154) in view of Krikorian (U.S. Patent 5,726,909).

Scheffler teaches a digital recording and/or reproducing apparatus very similar to that of the instant invention. For example, Scheffler teaches the following:

(a) as in claim 19, a reproducing unit 48 for reading out digital data from a first removable recording medium 46 at a first transmission rate faster than a known rate of the first removable disk recording medium 46 (Fig. 1; the first transmission rate such as data transfer among the components of the source side 46 is inherently higher than a data readout (reproduce) rate);

(b) as in claim 19, a temporary data storage unit 44 for temporarily storing digital data read out from the reproducing storage unit 48 (Fig. 2);

(c) as in claim 19, the temporary storage unit 44 includes an input/output calculation unit (in the reproducing unit 48 and recording unit 68) for processing the digital data from the reproducing unit in controller 40 with modulation and error correction and encoding (Figs. 3 and 9; column 8, lines 59 and 60; analog to digital conversion includes modulation, error correction and encoding are required to digitalized the data into a certain storable format);

(d) as in claim 19, modulation, error correction and encoding is done before feeding the digital data at a second transmission rate less than the first transmission rate to the temporary storage unit 44 for temporary storing the digital data (Fig. 3; column 3, lines 51 and 52; analog to digital conversion includes modulation, error correction and encoding are required to digitalized the data into a certain storable format; the second transmission rate such as data written to an optical drive is inherently less (slower) than the first transmission rate such as data transfer among the components of the source side 46);

(e) as in claim 19, a recording unit 68 for recording the digital data read out from the temporary data storage unit in a second removable recording medium 62 (Fig. 2);

(f) as in claim 19, a controlling means 42 for controlling the reproducing unit 48, the digital data storage unit 44 and the recording unit 68 in a second removable recording medium 62 (Figs. 1 and 2; computer controls the dubbing operation);

(g) as in claim 19, the controlling unit 40 operating so that when a data recording starting time point is previously set on the second removable recording medium 62 (Fig. 2; start time is the set download time);



(h) as in claim 19, data is read out from the temporary data storage unit 44 at a third transmission rate equal to a known recording rate for the recording medium and less than the second transmission rate (the third transmission rate for data recording in a second recording medium 62 such as a tape drive is inherently less than the second transmission rate of optical drive recording rate);

(i) as in claim 19, the data is routed to the recording unit 68 when a time is the recording starting time point, with the read-out data being recorded on the second removable recording medium 62 at the known recording rate for the removable second recording medium 62 (Fig. 2; any request of transferring or queuing of information from the reproducing unit is considered as a data recording starting time point); and

(j) as in claim 20, when the second removable recording medium 62 is not loaded on the recording unit and the time is the recording starting time point, the controlling unit 42 halts the recording operation of the second removable recording unit 68 (Fig. 2; inherent feature where a recording operation fails if there is no recording medium to record data).

However, Scheffler does not teach the following:

(a) as in claim 19, the temporary storage unit includes a hard disk drive as a temporary storage unit for temporarily storing the digital data.

Krikorian teaches a hard drive 18, 20, 22 which is used as a temporary storage unit (remote library ) for storing received files (Fig. 1).

Although Scheffler's temporary storage unit is not a hard drive, for the advantage of storage speed and capacity, it would have been obvious to one of ordinary skill in the art to replace Scheffler's optical storage medium with Krikorian's hard drive storage unit, because the hard drive can be used as a library so that it can retrieve data upon request faster than the optical storage medium.

### **Conclusion**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tsutsui et al. (5,717,953) is pertinent because Tsutsui teaches an information recording and transfer system having a high-speed buffer for recording in parallel on a low-speed recording medium.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any response to this action should be mailed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Or faxed to:

(703) 872-9306 (for formal communications intended for entry. Or:

(703) 746-6909, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Any inquiry of a general nature or relating to the status of this application should be directed USPTO Contact Center (703) 308-4357; Electronic Business Center (703) 305-3028.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

Kim-Kwok CHU

kc 4/1/05

Examiner AU2653  
April 1, 2005

(571) 272-7585

  
TAN DINH  
PRIMARY EXAMINER

4/03/05